TITLE: RADIATION TUBE STRUCTURE

Field of the Invention

This invention relates to a radiation tube, and more particularly to a tube with a heat dissipation structure.

Background of the Invention

The Central Processing Unit (CPU) is the heart of a computer, which runs calculation process at a fast speed. This causes high temperature. The temperature must be dissipated or otherwise the computer will malfunction. Fin plates and fans were later adapted to drop the temperature of the CPU. However, the modern CPU has been developed to an even faster speed, and the fin plates and fans are no longer enough to dissipate the heat.

In view of this, a later design was derived, which uses a radiating tube in the computer with coolant fluid flowing in the tube to cool down the temperature in the computer. The design of the tube, as shown in FIGS. 5 and 6, comprises a radiating tube 7 and a metal net 8. The metal net 8 is rolled and inserted into the radiating tube 7 for the coolant fluid to flow through the mental net 8. The mental net 8 will cause a capillary symptom to dissipate the heat with the coolant fluid.

The mental net 8 is formed by many a rectangular grid connecting with each other. When the coolant fluid flows through the radiating tube 7, the square grids of the mental net 8 produce capillary effect and transfer the coolant fluid from grid to grid to dissipate heat.

However, there are a number of disadvantages, such as:

1. The mental net is rolled and inserted into the radiating tube and engages with the inner wall of the radiating tube. The engagement of the mental net and the radiating tube may have gaps, and the coolant fluid may flow through the gaps,

which has less conduction.

2. Because the mental net is separated from the radiating tube, it has to be rolled before inserted into the radiating tube. Many areas of the rolled net will overlap to decrease the conducting effect.

There is a design using a metallurgical method to form a corn interior wall. This production is very effective, but the cost of production is also high, not cost effectiveness.

Summary of the Invention

It is the primary object of the present invention to provide a radiation tube structure, which provides a better heat dissipation.

It is another object of the present invention to provide a radiation tube structure, which is cost effectiveness.

It is a further object of the present invention to provide a radiation tube structure, which is more reliable and long lasting.

Brief Description of the Drawings

FIG. 1 is a perspective view of a first embodiment of the present invention;

FIG. 2 is an enlarged view of the first embodiment of the present invention;

FIG. 3 is a cross sectional view of the first embodiment of the present invention;

FIG. 4 is a perspective view of a second embodiment of the present invention;

FIG. 5 is a perspective view of a prior art, and

FIG. 6 is a cross sectional view of FG. 5.

Detailed Description of the Preferred Embodiments

A radiation tube structure of the present invention, as shown in FIGS. 1 and 2, comprises a mental tube 1 broached with lengthwise grooves 2 and continuous circular grooves 3 on the internal wall. (The circular grooves 3 may be milled in circle formed independently or in a spiral method.) The circular grooves 3 cross the lengthwise grooves 2 to form grids on the internal wall.

To practice, as shown in FIG. 3, coolant fluid flows through the interior of the tube 1. The grids formed by the lengthwise grooves 2 and the circular grooves 3 increase the surface. Thus, the coolant fluid will be in contact with larger surface. This helps the coolant fluid to spread more evenly on the surface of the internal wall of the tube 1. The capillary effect will reach to the best effect in dissipating heat within the tube 1.

FIG. 4 shows a second embodiment of the present invention. The internal wall of a tube 4 is milled with circular grooves 5 in one direction. After this process, the internal wall of the tube 4 is milled with circular grooves in an opposing direction to form many a rhombus grid. These grooves 5 and 6 increase the contact surface to help for dissipating heat.